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MARINE CORPS AIR STATION IWAKUNI FLEET MOORINGS UNDERWATER INSPECTION REPORT

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SEPTEMBER 1983

OCEAN ENGINEERING
AND CONSTRUCTION PROJECT OFFICE
CHESAPEAKE DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
WASHINGTON, D.C. 20374

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Abstract

This report contains the results of the inspection of the fleet moorings located near the Marine Corps Air Station, Iwakuni, Japan. A CHESNAVFACENGCOM-assigned Engineer-in-Charge and divers from Underwater Construction Team Two conducted the inspection from 7-10 May 1983.

- all 12. 1

Of the five moorings inspected, one was considered to be in good condition and satisfactory for continued use. Two were found to be in fair condition and still satisfactory for continued use. One was found to be in poor condition, and one was out of service. Specific comments concerning the current condition of each of the moorings and recommendations for corrective actions are contained herein.

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MCAS IWAKUNI FLEET MOORING INSPECTION REPORT

1.0 INTRODUCTION

- Background. Under the COMNAVFACENGCOM Fleet Mooring Maintenance (FMM) Program, CHESNAVFACENGCOM has been assigned the responsibility to plan and conduct periodic diver inspections of all fleet moorings worldwide. In carrying out this responsibility, CHESNAVFACENGCOM designated an Engineer-in-Charge (EIC) to provide inspection planning and onsite technical direction for the underwater inspection of fleet moorings located at the Marine Corps Air Station Iwakuni, Japan. The actual underwater portion of the inspection was performed by divers of Underwater Construction Team Two (UCT-2). The inspection was conducted 7-10 May 1983.
- General Mooring History. MCAS Iwakuni normally operates and maintains five F-class fleet moorings. One of these moorings, however, is currently out of service. Buoy B-I and part of its riser chain have been disconnected from the remainder of the riser and the mooring ground tackle and are temporarily positioned in the inner harbor pending the completion of dredging operations. The geographical location of Iwakuni and its fleet moorings are shown in Figures I and 2.

The remaining four moorings are utilized as fuel tanker moorings. Each is of Japanese design and consists of an 8-foot-diameter drum-type buoy, a riser chain, a 15,000-pound concrete sinker at the base of the riser, three ground legs, and three 10,000-pound anchors. Figure 2 is a schematic drawing which indicates the general composition of this type of mooring. All four of the operational moorings are in relatively shallow (25-50 feet) water.

A POL pier is scheduled for construction with an estimated completion date in early FY 86. At that time, MCAS lwakuni plans to remove all operational fleet moorings from service.

2.0 INSPECTION PROCEDURES

2.1 <u>Inspection Objectives.</u> The purpose of the mooring inspections was to determine the general physical condition of the buoys and chain assemblies and, when



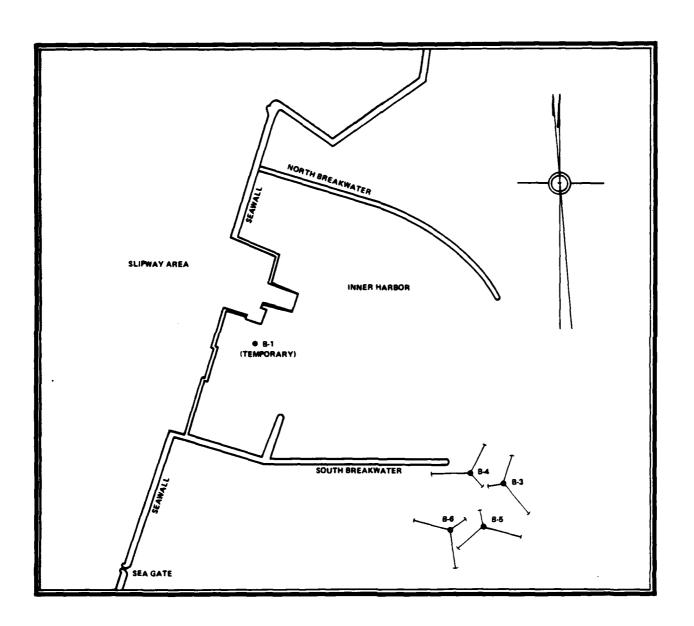


FIGURE 2. GEOGRAPHIC LOCATIONS OF MCAS IWAKUNI FLEET MOORINGS

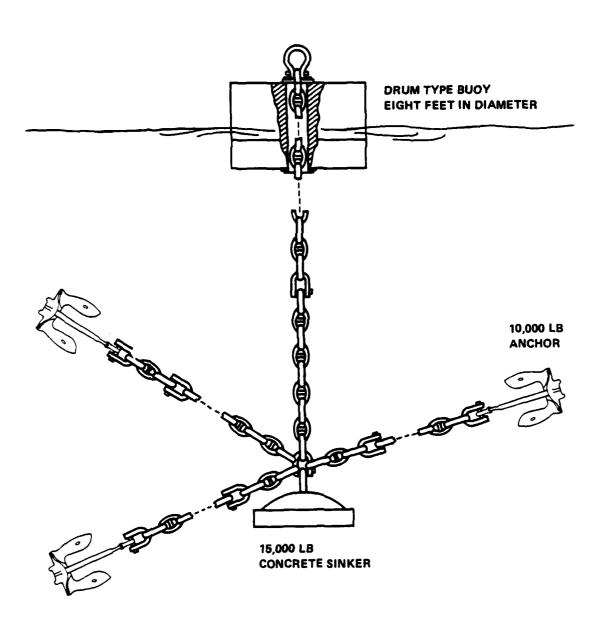


FIGURE 3. SCHEMATIC DRAWING OF A TYPICAL MCAS IWAKUNI MOORING

possible, to verify or update existing as-built and maintenance records. Divers inspected only a portion of the submerged buoy hull and chain assemblies in order to compile a general description of the mooring's condition. The existence of fairly consistent measurements during this inspection provides a good indication of the mooring's overall condition. It should be kept in mind that periodic underwater inspections are intended as an expedient and relatively inexpensive supplement to accurate maintenance records. As such, they cannot fully substitute for a complete inspection involving recovery of the mooring and the measurement and evaluation of each component.

Chain wire diameter measurements are used to evaluate the condition of a mooring. After cleaning to bare metal, a selective sampling of the wire diameter of chain links and connecting hardware was taken in order to determine the amount of deterioration due to corrosion and wear. "Single link" measurements were taken where chain was slack, to detect corrosion loss. "Double link" measurements were taken where two links connect under tension to detect the combined effects of corrosion and wear. Chain links and other components which measured 90 percent or greater of original wire diameter are considered to be in "good" condition; measurement between 80 percent and 90 percent of original diameter is considered "fair" condition and is cause for the mooring to be downgraded in classification; any measurement less than 80 percent is considered "poor" and is cause for the mooring to be declared unsatisfactory for fleet use. When a mooring is constructed from oversized chain, a measurement between 80 and 90 percent of the original wire size results in a mooring being considered in "fair condition" but no downgrading is required if the worn chain is still larger than required.

Standard underwater inspection procedures do not call for the inspection of any part of the mooring which has been buried. Ground legs and risers were observed only to the point at which they became buried; no attempt was made to locate and inspect anchors or other mooring materials which were not readily visible.

2.2 Buoy.

2.2.1 Buoy Topside. The buoy was inspected to determine its general condition. The buoy markings were checked for conformance to those noted in applicable charts. The diameter and freeboard of the buoy were recorded. Physical damage such as holes, dents, or listing were noted. The fiberglass coatings were inspected for cracks, wear, peeling, or rust-bleeding.

The buoy fenders and chafing rails were checked for integrity and secure connection to the buoy. Buoy top jewelry was measured with calipers to find the overall outside dimensions and areas of most severe reduction in wire size.

- 2.2.2 <u>Buoy Lower Portion</u>. Divers inspected the buoy below the waterline. The thickness of marine growth was recorded, two 1-foot-square areas were selected and cleared of growth without damaging the fiberglass, and the condition of the fiberglass was noted.
- **Riser.** To determine chain wear, each riser chain was inspected by taking three consecutive double link measurements, using calipers, at both ends and at the center of the riser. To determine original chain size, divers measured the length of a chain link and took single link caliper measurements of its wire diameter.
- **Ground Legs.** Except for Mooring B-6, where a short section of each of its three ground legs was observed, all ground legs were buried in the bottom. The exposed sections of these legs were visually inspected, and single link caliper measurements of their wire diameter were taken.
- 2.5 <u>Sinker.</u> When visible, the hairpin of each sinker was inspected for wear and measured with calipers. The concrete around the hairpin was checked for spalling.
- 2.6 Anchors. No anchors were sighted during the course of the inspection.

3.0 INSPECTION SUMMARY

An in-depth discussion of the inspection results is presented in Annex A. Annex B contains photographs, and Annex C contains a copy of the preliminary report of the results of the inspection.

The data gathered during the inspection indicates the following:

- o Considering their rating and use as F-class moorings, all of these moorings consist of oversized chain and accessories.
- o None of the MCAS Iwakuni fleet moorings are cathodically protected.

- o The buoy and 12 feet of riser chain of Mooring B-1 have been disconnected from the remainder of this mooring's riser and its ground tackle. This mooring is not in service.
- o Mooring B-3's buoy rides very low in the water and has a list of about 20 degrees. In addition, the overall exterior of the buoy is in relatively poor condition.
- o Buoy B-4 has a very low freeboard with its top fender partially submerged. The buoy has a 15-20 degree list. The buoy's fiberglass coating is peeling off and the hull is badly rusted.
- o The swivel in the riser of mooring B-6 is worn to approximately 60 percent of its original 2-inch wire diameter.

Table I summarizes the inspected condition of each mooring.

4.0 MOORING INSPECTION COMMENTS AND RECOMMENDATIONS

As a result of an analysis of the inspection data, the following comments/recommendations are considered pertinent:

- o To reduce corrosion and wear, buoy B-1 and its attached section of riser chain should be removed from the water and stored ashore pending a decision on its future use as an operational fleet mooring.
- o Buoys B-3 and B-4 should be removed from the water at the earliest practical time and the cause of their lists determined and repaired. In addition, the exteriors of both buoys should be refurbished.
- o Mooring B-5 is in satisfactory condition for continued use as a class F mooring.
- o The swivel in the riser of mooring B-6 should be replaced as soon as possible. Until this can be accomplished, this mooring is unsatisfactory for fleet use as an F-class mooring.

TABLE 1

INSPECTION SUMMARY

MOORING NUMBER	REPORTED CLASS	CON GOOD	DITIC FAIR		REMARKS	CURRENT STATUS
1	F			1	Out of service. Recommend recovery and storage ashore.	UNSAT
3	F		1		Recommend repair buoy at earliest practical time. Worn riser still satisfactory for class F	SAT
4	F		1		Recommend repair buoy at earliest practical time. Still satis-factory for class F mooring.	SAT
5	F	"			Satisfactory for continued use as a class F mooring.	SAT
6	F			_	Swivel worn to 60%. Recommend overhaul	UNSAT

ANNEX A

MOORING INSPECTION RESULTS

INSPECTION RESULTS MOORING B-1

General

This mooring is not in service. The buoy and part of the riser chain were moved from the mooring's normal location (east-southeast of the south breakwater) to a position close to the Surface Division's Boat House in the inner harbor. This geographical position is temporary pending completion of dredging operations in the outer harbor.

Buoy

This is a drum-type budy with a 10-foot diameter and a hawsepipe. The budy top and the topside jewelry are in good condition. The budy side plating is striped with orange paint. The budy is maintained in place by a wire rope attached to it and a small concrete clump lying on the bottom.

Riser

Only 12 feet of riser chain is attached to the buoy. A double link measurement of the lower two links and a single link measurement of the bottom link were both greater than 90 percent of the required 1 1/4-inch diameter for a class F mooring. Location of the remainder of the riser and the ground legs is not known.

Ground Legs/Sinker/Anchors

Not visible for inspection.

Recommendation

The mooring buoy and its 12 feet of riser chain should be removed from the water and placed ashore for storage until the remainder of the mooring components can be recovered from the bottom, and the entire mooring either overhauled or permanently removed from service.

MOOHING NO.:		1-8	CLASS	K		LOCAT	ON:/E	AKVU	LA.	1:34-08	-13"	OCATION: /WAK VA) LAT: 34-08-13 N LONG: 132-15-19 E
WATER DEPTH:	PIR	, 82		ANCHOR SIZE/TYPE:	SIZE/TY	Ë	NI		BUOY	TYPE: 2	RUM K	BUOY TYPE: DRUM W/HAWSE PIPE
BOTTOM TYPE	YPE:	SAND		a∪M 🔀	X	G CLAY		CORAL		ROCK	Visibili	Visibility $\frac{5-16}{}$ D = depth NI = not inspected, inaccessible
							CONDITION	ITION				
9	COMPONENTS	IS	Ī	NEW	SIN	SINGLE LINK %	* ×	nod	DOUBLE LINK %	K %	a	COMMENT
			-	EST	6 6	→	8	6 8	\$0¢	8	· · · · · · · · · · · · · · · · · · ·	
800	BUOY HARDWARE	IARE										TEN FAOT DIAMETER BUOY. BUOY
2"EN	END LINK							-				PAINTED WITH ORANGE STRIPES.
13/4"	134" SHACKLE	37										
3 1/4 " 5	3 14 " SHACKLE	F										
	NEAR BUOY	зиох										OULY 12' OF RISER ATTACHED TO
RISER	MIDDLE	ıı.		24"	/>			//				REST OF RISEK
	NEAR (NEAR GRD RG	\leftarrow									GROUND LEGS BINKER, AUCHORS
A-3	GROUND RING	NG			•						`	MISSING AND PROBABLY BURIED.
	UPPER END	END			11/4	70	4 14	LAST TOWN LIVES	17 0	KS	12,	THERE HEASU BEHENTS EACH LIDK,
LEG CAN	MIDDLE	E			.8//	5, 1	7 7	LAST LIVE	lVk			BUDY HELD IN PLACE BY WIRE
	ENTER	ENTERS BOTTOM					1					ROPE TO SMALL CONCRETE CLUMP.
CBOLIND	UPPER END	END										CLUMP LOCATION MARKED WITH
LEG NO B	MIDDLE	E	9									RED FLAG
	ENTER	ENTERS BOTTOM	γ 19									
	UPPER END	END	51									
LEG NO C	MIDDLE	Ę	W									
		ENTERS BOTTOM										
	UPPER END	END										
SHOOM 1 EG NO D	MIDDLE		\dashv									
	ENIER	ENTERS BOTTOM	→									
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LOCATION: /WAK VW / LAT: 34-08-13" N LONG: 132-15-29 "

INSPECTION RESULTS MOORING B-3

Buoy

This is a Japanese-built 8-foot diameter buoy with a hawsepipe. The buoy rides low in the water (little freeboard) and has about a 20-degree list. Due to this list, part of the fender is underwater. Most of the paint has been chipped off the galvanized pipe chafing rail, its connections are badly rusted, and the pipe contains numerous dents. The top hardware is rusted and scaling. The buoy is fiberglass coated, but beneath this coating the side plating is badly rusted. The rubbing casting appears to be in satisfactory condition. The bottom of the buoy is heavily encrusted with marine growth.

Riser

The original size of the riser chain (2 1/2 inches) is oversized for a class F mooring, which only requires 1 1/4-inch-diameter chain. All caliper double link measurements revealed that the riser chain is 80 percent or larger than its original wire size. The chain is covered with a heavy marine growth from the bottom of the buoy to a depth of about 45 feet. Between that depth and the bottom (52 feet), the chain is free of marine growth but is covered with rust.

Ground Legs/Sinker/Anchors

Not visible for inspection.

Recommendations

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in the case of mooring B-3, the double link measurements of even the more badly worn chain links (4 1/4 inches) are almost 2 inches larger than the 2 1/2-inch double link measurement of the 1 1/4-inch-diameter chain required for an F-class mooring. Therefore, this mooring should still be capable of withstanding F-class mooring loads.

Due to low freeboard and list, it would appear that Buoy B-3 may be leaking and taking on water. In addition, the overall external condition of the buoy is poor. The buoy should be recovered at the earliest possible time, the cause of its low freeboard and list determined and repaired, and the buoy refurbished as required.

BUOY TYPE: DRUM W/HAUSE PIPE	ROCK Visibility 10 = depth NI = not inspected, inaccessible		INK % D COMMENT	-08	Buy HAS 20 LIST. MART OF TOP FEUDER	IN WATER DUE LOW FREEBOARD. PIPE CHARUS	RAIL DEUTED. HARDWARE ELETED AND	SCALUSE. HEAVY GRAVITH ON BOTTOM . ABOUT 8	DIAMETER BUOY. RUBBING CASTING OK.	<10 OVERSIZED CHAID FOR CLASS F HOORWG.	, στ	45'	52		7 ALL MENSURE HEUTS HADE	GROND LEGS SINKER MUCHURS BURIED										DIVERS. MILLER/SAKO/COTTE/LESSO
BU0			DOUBLE LINK %	90+						>	777	100			Eurs	GRS										ة ا
L	CORAL	CONDITION	00	÷06						7		•	111		SUREI	CALI PERS										V
NI		CON	LINK %	-08					OPENENT	4/2"	•	43			LMEA	WITH C										JOUES
TYPE: _	K CLAY		SINGLE LINK %	+08 } +					L. MENSO	48.	44		8 4%		7 4	3										l`
ANCHOR SIZE/TYPE:	Of.			+06			_		D.1 .	?	4%.	4%"	4%"		<u> </u>							_				ENGINEER IN CHARGE
ANCHO	апи 🛛		NEW							2%			^													NEER IN
	٥		ž																						>	ENGIL
52,	SAND		COMPONENTS		BUOY HARDWARE	SHACKLE	CHAIN			NEAR BUOY	MIDDLE	NEAR GRD RG	GROUND TIMG RISER	UPPER END	MIDDLE	ENTERS BOTTOM	UPPER END	MIDDLE	ENTERS BOTTOM	UPPER END	MIDDLE	ENTERS BOTTOM	UPPER END	MIDDLE	ENTERS BOTTOM	9 MAY 83
WATER DEPTH:	BOTTOM TYPE		COMPC		BUOY	3 4" 51	RISER CHAIN			Z	RISER		A-6	_	CKOUND LEG		n Garage				LEG W	_		LEG ON		DAIL: 91

CHESTAVEACT WITOM REPORT FOR 1-931261, "MEAS THAKINE FLEET MINREYS INSPECTION REPORT"

LOCATION: TWAKUNI LAT: 34-08-02 N LONG: 132-15-06 E

CLASS:

8-3

MODIFING NO.:

INSPECTION RESULTS MOORING B-4

Buoy

This is an 8 foot-diameter Japanese-built drum buoy with a hawsepipe. The buoy is riding extremely low in the water and has a 15-20 degree list. The fender is partially submerged. The topside hardware, galvanized pipe chafing rail, and hawsepipe are all severly rusted. The fiberglass coating is badly chipped and is peeling from the buoy. The bottom of the buoy has a heavy coating of marine growth.

Riser

The length of a riser link was measured to be 13 inches, which would indicate that the original wire size of the chain was 2 1/8 inches. Double link measurements of the riser were all greater than 90 percent of the estimated original wire size. In addition, this chain is oversized for an F-class mooring (1 1/4-inch). The riser is covered with an extremely heavy marine growth. The last link of the riser is attached to a half-buried swivel by a detachable link. About 15 feet from the swivel, the divers observed and measured 2 1/8-inch-diameter chain links emerging from the mud, running on the surface for about 5 feet and then reentering the mud. It is not known whether this is a portion of the riser or ground leg chain.

Ground Legs/Sinker/Anchors

Not visible for inspection.

Recommendations

The inspected portions of this mooring are in satisfactory condition and there is no reason why this mooring cannot continue to be used as a class F mooring. However, due to low freeboard and list, it would appear that Buoy B-4 may be taking on water. In addition, the overall external condition of the buoy is poor. The buoy should be recovered at the earliest possible time, the cause of its low freeboard and list determined and repaired, and the buoy refurbished as required.

A-8

I CHARGE: JONES DIVERS: MILLER SAKO COTTELESSA ENGINEER IN CHARGE: JOVES DAIL 9 MAY 83

INSPECTION RESULTS MOORING B-5

<u>Buoy</u>

This is an 8-foot-diameter Japanese-built drum-type buoy with a hawsepipe. The buoy is fiberglass coated, has a galvanized pipe chafing rail and a fender near the top of the buoy. There is a light coating of rust on the top of the buoy while the buoy hardware is moderately rusted.

Riser

The length of a riser link was measured to be 13 1/2 inches which would indicate that the original wire size of the chain was 2 1/4 inches. Double link measurements of the riser were all greater than 90 percent of the estimated original wire size. This chain is oversized for a class-F mooring (1 1/4-inch). The riser is covered with an extremely heavy coating of marine growth between the buoy bottom and a depth of 38 feet. From this point to the bottom (46 feet) the chain is free of growth but rusted. About 20 feet of riser chain is visible on the bottom before it enters the mud.

Chain Legs/Sinker/Anchors

Not visible for inspection.

Recommendation

This mooring is in satisfactory condition for continued use as a class F mooring.

MOOR	MOORING NO: -	6.5	CLASS	S:		- 10CA	TION: 7	MCAS	DIL	1.34.0	9-59	MCAS
WATER	WATER DEPTH: _	-7+		ANCHOR SIZE/TYPE:	SIZE/T	YPE:_	MI		BUO	/ TYPE:J	DRUM	BUOY TYPE. DRUM WHAKE PIPE
80110	BOTTOM LYPE:	SAND		алм 🔀		K CLAY		CORAL		ROCK	Visib	Visibility $\frac{t}{10^{-1}}$ D = depth NI = not inspected, inaccessib
							CON	CONDITION				
<u>. </u>	COMPONENTS	ENTS	ž	NEW	S	NGLE	SINGLE LINK %	00	DOUBLE LINK %	% **	٥	COMMENT
				EST.	06	80	-98	8	98	88		
	BUOY HARDWARE	PDWARE					ļ					ABUIT 8' DIAMETER BUOY. FIBERGLASS
1//	11/2" SHACKLE	F170										OK. PIPECHAFING RAIL / FENDER OK
3	4"5#	3 "4" SHHCKLE										SOME RUST ON TOP. HARDWARE
12	RISER											Rusty
					D.L.P		EASUE HEUT					
	NE	NEAR BUOY		24"		4%	48" 42"	3			<10,	EXTREMELY HEAVY GROWTH BOTTOM
RISER		MIDDLE			4%	4%"	4%"	111			20'	OF BUDY TO 38' DEPTH. CHAIN CLEAN BU
	NE.	NEAR GRD RG		<u></u>	4%"	4 1/2"	4 1/4."	11/1			,95	
	GROUND RING	RING										TWENTY FEET OF RISED ON BOTTOM
\ -10	_	UPPER END										REFORE CHAIN ENTERS MUD. 1312"
LEG POS POS POS POS POS POS POS POS POS POS		MIDDLE										LINK LENGTHS.
		ENTERS BOTTOM										
GROWING		UPPER END										LEGS (SINKER MUMPRS BURIED
LEG	 }	MIDDLE										
		ENTERS BOTTOM										
000		UPPER END										
LEG NO C		MIDDLE										
	_	ENTERS BOTTOM										
3000	_	UPPER END										
LEG NO D		MIDDI E										
	ightarrow	ENTERSBOTTOM	>									
												1

E: JONES DIVERS: MILLER/SAKO 83 ENGINEER IN CHANGE: JONES

INSPECTION RESULTS MOORING B-6

Buoy

This is a Japanese-built drum-type buoy with a hawsepipe. It is fiberglass coated and has a galvanized pipe chafing rail. This rail and the buoy's top deck have no rust. A fender is located at the very top of the buoy. The buoy has about a 10-degree list and its hull, below the waterline, shows some signs of rust bleeding. Overall, the buoy is in good condition.

Riser

About 20 feet down the riser chain from the buoy, the divers noted a swivel. This swivel was measured and found to be about 60 percent of its original 2-inch wire diameter. The length of a riser link above the swivel was measured to be 13 1/2 inches, which indicated that the upper portion of the riser was originally 2 1/4-inch chain. The length of a link in the 5 feet of riser in the water column below the swivel measured 12 3/4 inches, indicating that the lower portion of the riser was originally 2 1/8 inches in diameter. Both portions of the riser chain in the water column are oversized for an F class mooring (1 1/4-inch), and both sections measured 80 percent or larger of their original estimated wire diameters.

The riser reaches the bottom at a depth of 25 feet and about 75 feet of it rests on the bottom before its last link is attached with a shackle to the hairpin of a sinker. As depicted in Figure A-1, the on-bottom segment of the riser chain is comprised of three different wire sizes of chain.

Sinker

The 15,000-pound concrete sinker is partially buried in the bottom. Five 2 1/2-inch shackles are attached to its hairpin. One attaches the riser, three attach ground legs, and the fifth is a spare.

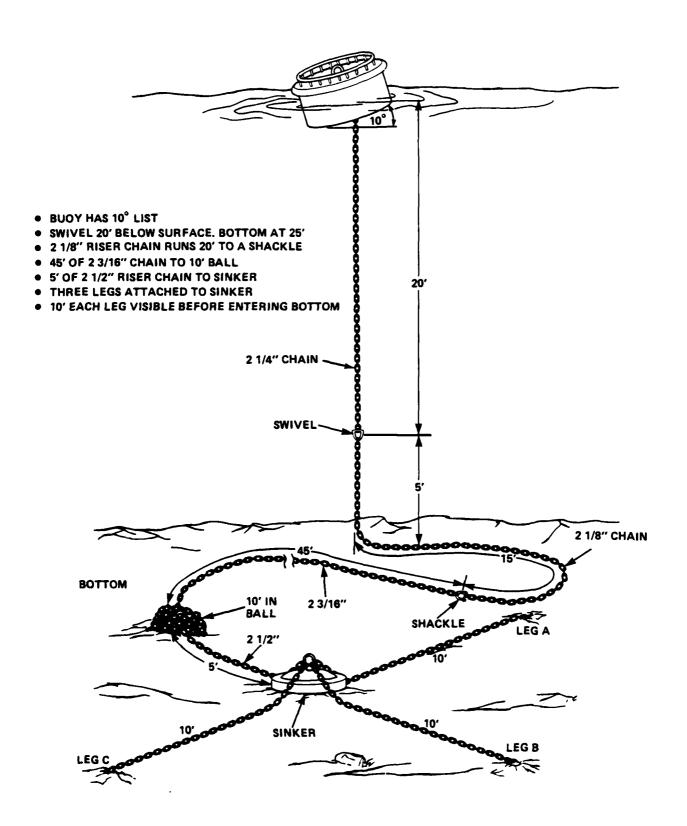


FIGURE A-1. SCHEMATIC DRAWING OF MOORING B-6

Ground Legs

The upper 10 feet of the three ground legs was visible before the legs entered the bottom. The observed portions of these legs appeared to be in satisfactory condition.

Anchors

Not visible for inspection.

Recommendation

The weakest component in this mooring is the riser swivel which measures about 60 percent of its original 2-inch wire diameter. Although the diameter of the remaining steel in this swivel is satisfactory for use in a class F mooring, the number of cyclical loads this swivel has been subjected to and the condition of the internal structure of the steel remaining in its wear zones is unknown. Recommend that this swivel be replaced at the earliest possible time. In the interim, this mooring should not be used

ANCHOR SIZE/I NEW S LS T S T S T S T S T S T S T	ER DEPTH: 25 / ER DEPTH: 25 / COMPONENTS NI COMPONENTS NI COMPONENTS NI SAMPCKLE 34 SHACKLE 15 ER NEAR BUOY NUND N	CLASS: F LOCATION: TWAKUNI LAT. 34-07-57 " LONG: (32-15-00 F	ANCHOR SIZE/TYPE: NI BUOY TYPE: DRUM W/HAUSEPIPE		CONDITION	NI NEW SINGLE LINK % DOUBLE LINK % D	EST 80+ 80- 80+ 80- 80+ 80-	FENDER AT THE VERY TOP OF THE		CHAFING EAIL (TOP DECK CLEAN-NO	RUST, BUDY HAS IN LIST. SOME RUST	D.L. MEASUREMENT	,01> //~ "% th 8/th 8/th	\$ 3%" 4" 4"8" V \ 20' SWIVEL AT 20' WOEN TO ABOUT 60% OF	2/8 376" 334" 534" 1 11	32" 32" 32"		45,	3RD 10' /		MCKLED	OM RODITIONAL SHACKLES ATTACHED TO	CLUMP. THEEF ATTACHED TO LEGS-	ONE SPACE.	OM ABOUT TEN FEET EACH LEG VISIBLE	BEFORE CHAIN ENTERS BOTTOM		
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A-14

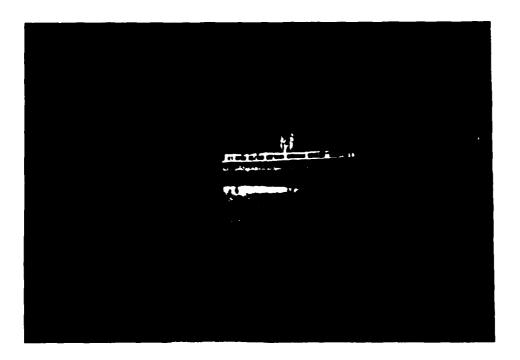
DATE 9 HAY 83 ENGINEER IN CHARGE: JOUES

DIVERS: MILLER / COTTELLESSA

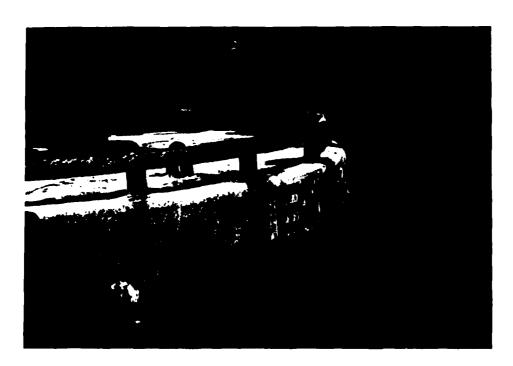
PACKETER FOR REPORT FPD-1 93(26), "MCAS IMAYONI FLEET MODGINGS INSPECTION REPORTS

ANNEX B

PHOTOGRAPHS



Buoy B-1 in its Temporary Location



Buoy B-3. Note Chafing Rail/Upper Hawse Pipe Rust, Heavy Marine Growth, and Low Freeboard



Mooring B-3. Rust on Riser Chain Near the Mud Line



Extremely Low Freeboard of Buoy B-4



Buoy B-4. Note Rusted Chafing Rail and Upper Hawse Pipe



Mooring B-6. Worn Swivel and End Link in Riser Chain

ANNEX C

REFERENCES

DISTR	· <u>·</u> ··································	······································
T. JONES, FPO-1C{PDC},	21 JUNE 1983 20-10(PD()).	.00FP0-lCFP0-l/la
H. S. STEVENSON, CDR,	CEC - USN SECURITY CLASSIFICATION	DATE TIME GROUP
DD 100M 173/2 (OCR)	PREVIOUS EDITION IS OBSOLETE	* US GPO 1901 - 336401 (7193 3

- C. MOOKING 8-3: BUOY VERY LOW IN WATER. LIZITING 25 DEGREES
 CHAIN IN FAIR CONDITION. RECOMMEND REPLACE OR REFURBISH BUOY.
- D. MOORING B-b: SWIVEL IN RISER WORN TO APPROXIMATELY bo PERCENT OR ORIGINAL SIZE. RECOMMEND OVERHAUL.
- E. MOORING B-1: RISER CHAIN DISCONNECTED FROM GROUND CHAIN

 AT 12-FOOT DEPTH, APPARENTLY BY CONSTRUCTION/DREDGING CONTRACTOR

 WORKING IN AREA. ASSUME LOCATION OF GROUND LEGS IS KNOWN. RECOMMEND

 RECOVERING MOORING TO BE REINSTALLED AFTER DREDGING IS COMPLETE IF

 STILL NEEDED.
- IN TROPAR NOITSAGENT DESCRIPTION OF DETAILED INSPECTION REPORT IN TROPARE TRUBUS.
 PERFL TRUBUS

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004	IFTER TYPED NAME TITLE OFFICE SYMBOL PHONE	SPECIAL INSTRUCTIONS	
	TYPED NAME TITLE OFFICE SYMBOL AND PHONE		
	SIGNATURE	SECURITY CLASSIFICATION	DATE TIME GROUP
•		account Chassife (Ca	

DD , "00" 173/2 (OCA)

PREVIOUS EDITION IS OBSOLETE 5:0 0102 (F-400 1735

W US GPO 1981 - 336-081

1 2193 32

ROUTINE

R 132055Z MAR 83

FM CHESNAVFACENGCOM WASHINGTON DC

TO MCAS IWAKUNI JA

INFO COMNAVFACENGCOM ALEXANDRIA VA COMCRPAC PEARL HARBOR HI COM THREE ONE NOR PORT HUENEME CA PACHAVFACENGCOM PEARL HARBOR HI COM THREE ZERO NCR GUAM UCT TWO

BT UNCLAS //N11000//

- 1. AS PART OF THE COMNAVFACENGEOM FLEET MOORING MAINTENANCE (FMM) PROGRAM, CHESNAVFACENGEOM, WITH DIVER SUPPORT FOR UCT TWO, PLANS TO CONDUCT AN UNDERWATER INSPECTION OF THE 5 MOORINGS AT MCAS, IWAKUNI DURING MAY 83. AVAILABLE DATA INDICATES 1 CLASS E MOORING, MATER DEPTH UNKNOWN, AND 4 CLASS F MOURINGS IN 22-40 FEET OF MATER. INSPECTION WILL RESULT IN SPECIFIC CONDITION ANALYSES AND RECOMMENDATIONS BY MOORING AND WILL ENHANCE PROGRAMING OF FUNDS FOR FLEET MOORING MATERIAL SUPPORT.
- 2. THE FLEET MOORING INSPECTION TEAM WILL CONSIST OF A CHESDIV ENGINEER-IN-CHARGE (EIC) AND A DET FROM UCT THO. IN ORDER TO PREPARE A DETAILED INSPECTION PLAN, THE FOLLOWING INFORMATION IS REQUIRED PER MOORING:
- A. MAINTENANCE HISTORY WHEN INSTALLED, WHEN INSPECTED, WHEN OVERHAULED, LAST REPORTED CONDITION, ETC.
 - B. COPIES OF MOORING DESIGN CALCULATIONS AND DRAWINGS.
 - C. COPIES OF "AS-BUILT" MATERIALS LIST.
- D. FACILITY MAP SHOWING LOCATION OF ALL MOORINGS WITH SPECIFIC LOCATIONS FOR THOSE CURRENTLY IN USE.
- E. ANTICIPATED MODRING USAGE DURING THE INSPECTION PERIOD TYPES OF SHIPS.
- F. PLANNED REPAIRS AND OVERHAULS PARTICULARLY THOSE BEFORE THIS INSPECTION.
 - G. TYPES AND CLASSES OF SHIPS USING MUDRING.
- H. WHETHER CATHODIC PROTECTION SYSTEMS ARE INSTALLED AND TYPE OF MATERIALS UTILIZED.
- 3. REQUEST MCAS, INAKUNI MAIL ABOVE INFORMATION AS SOON AS POSSIBLE

DLVR: CHESNAVFACENGCOM WASHINGTON DC(9)...ORIG

RTD:000-000/CUPIES:0009

593498/103 1 OF 2 M1 0448 103/23:28Z 132055Z MAR 83 CSN:RXOY00491 CHESNAVFACENGCUM WASHINGTON DC

TO CHESNAVFACENGEOM (CODE FPO-1C7), BLDG. 212, MASHINGTON NAVY YARD, WASHINGTON, DC 20374.

- 4. ADDITIONALLY; REQUEST MCAS, INAKUNI REPLY BY MESSAGE WITH THE ABOVE INFURMATION EXCEPT FOR DRAWINGS AND MAPS BY 21 APRIL 1983. REGRET LATENESS OF THIS REQUEST. MCAS EFFORT TO PREPARE INFO WILL BE BE GREATLY APPRECIATED AND WILL SIGNIFICANTLY ENHANCE THE ACCURATE DOCUMENTATION OF CURRENT MODRING CONDITIONS AS WELL AS THE PROCUREMEN OF NEW FLEET MOORING MATERIALS.
- 5. CHESNAVFACENGCOM POINT OF CONTACT IS MR. JAMES MCLAUGLIN AT AUTOVON 288-3881 OR (202) 433-3881.
 BT

593498/103 CSN:RXOY00491 2 OF 2 M1 0448 103/23:28Z 132055Z MAR 83 CHESNAVFACENGCUM WASHINGTON DC

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F- CT CPACFLT PEARL HARBOR HI

TO C' COPAC PEAKL MARBOR HI

JEFU CHHAV"AT WASHINGTON DC TOMA A 1 PSYSCUM PASHINGTON DC CUT PAVEACESGODY ALEXANDRIA VA CUTHAVIELONG AASHINGTON DC CUMMAVSUPEPAC SAN DIEGO CA CUMMANAIPPAC SAN DIEGU CA CG FMFPAC CUMUCEANSYSPAC PEARL HARRUR HI CHYMAYMARIAMAS GUAR CUMPACMISTESTEEN FT MUGG CA MESTRAVEACENGEDA SAL BRUNG CA DICC MIDPAC PEAKL HARRON HI 11CC 611511 PICC DIEGO GARCIA HOUSTON TX P., C G1,44 P.C YUKUSUK# J4 PHC SAM FRANCISCO CA SHE THREE ZERU NCH GUAM THEFAL LENTERVILLE BEACH CA F'STE SFAL BEACH CA LAVSHIPHEPEAC SURIC HAY RP " TISOUT JA BEIRYD PUGET SUNNE "A ISC SH'S DIEGO CA THIREFFAC HANGOR AA ".C" GUA 4 MANSUPPEAC DIEGO GARCIA NAVSTA LONG REACH CA MSC PEARL HARUDE HI MAVSHIPYO MAPE ISLAND CA PACHISRAUFAC MANAHEA HARKING SANDS HI

COMNAVSEASYSCOM WASHINGTON DC COMNAVELEXSYSCOM WASHINGTON DC CNR ARLINGTON VA COMNAVLOGPAC PEARL HARBOR HI COMSUBPAC PEARL HARBOR HI COMTHIRDFLT COMMARCORBASESPAC CAMP H M SMITH HI COMNAVFORJAPAN YOKUSUKA JA COMUSNAVPHIL SUBIC BAY RP PACNAVFACENGOOM PEARL HARBOR HI CHESNAVFACENGCOM WASHINGTON DC DICC SUWESTPAC MANILA RP DICC FAR EAST YOKOSUKA JA PWC PEARL HARRUR HI PWC SUBIC BAY RP PWC SAN DIEGU CA COM THREE ONE NOR PORT HUENEME CA UCT TWU HAVOCEANSYSCEN SAN DIEGO CA KSU SUHIC HAY RP MCAS IMAKUNI JA WAVUSEAMARENGSTA KEYPORT WA HAVMAG LUALUALEI HI SUBASE BANGOR WA NAVPHIBASE CORONADO SAN DIEGO CA NAVSHIPREPFAC GUAM NAVSTA SAN DIEGO CA NAVSHIPYD PEARL HARBOR HI SUBASE PEARL HARBOR HI

A7 UNCLAS //W11000//

SUBJ: UCT THU FYB3 EMPLOYMENT TASKING

PLVH: CHESHAVFACENGOU! MASHINGTON UC(9)...IMFO

RTD:000-000/CUPIES:0009

114776/235 1 UF 3 M1 0308 235/23:21Z 210331Z AUG 82 C5M:Rx0100304 CINCPACFLT PEARL HARBOR HI

- A. CINCPACELT PEARL HARBOR HI 260654Z JUN 82
- 1. REF A REQUESTED NOMINATIONS OF PROJECTS FOR UCT TWO ACCOM-PLISHMENT FY83-85. FROM THE RESPONSES TO REF A THE FOLLOWING PROJECTS ARE TASKED FOR ACCOMPLISHMENT IN FY83:
 - A. CENTERVILLE BEACH (CLASSIFIED)
 - B. ARCTIC WEST (CLASSIFIED)
 - C. BARKING SANDS, HI, CABLE LANDING AND REPAIRS
 - D. WPNSTA SEAL BEACH, DEMOLISH ANAHEIM BAY BRIDGE
 - E. NSD SUBIC, PILE REPAIR POL PIER
 - F. NSD SUBIC, PILE REPAIR MARINE TERMINAL PIER PHASE I (REPAIR ALL SEVERE AND MAJOR DAMAGE)
 - G. NAVSHIPREPFAC SUBIC, INSPECT ALAVA WHARF
 - H. FLEET MUORING INSPECTION PACIFIC DATA BASE (PEARL HARBOR HI, GUAM, YOKOSUKA, INAKUNI, SASEBO, INDIAN, ISLAND WA, BREMERTUN WA)
 - I. NAVMAG LUALUALEI, INSPECT AMMO PIERS W1-5
 - J. UNDERWATER INSPECTION PROGRAM (NSC SAN DIEGO)
 - K. SUPASE, BANGOR WA, UNDERWATER INSPECTION
 - L. TRIREFFAC BANGOR WA, UNDERWATER MSF RANGE REPAIR
 - M. DEGAUSSING RANGE SURVEY, SAN FRANCISCO CA
 - N. NAVPHIBASE CORONADO SAN DIEGO CA, PIER INSPECTIONS
- 2. THE FULLOWING PROJECTS ARE TASKED AS FILL IN WORK FOR FY83:
 - A. UNDERWATER INSPECTION PROGRAM (NAVSTA PEARL HARBOR)
 - B. NAVUSEAHAHENGSTA KEYPORT NA, INDIAN IS PHASE TWO MODRING
 - C. NSD GUAM, REPAIRS TO SIERRA WHARF GUAM.
 REQUIRES COURDINATION WITH ON SITE NMCB FOR ACCOMPLISHMENT.

THE FOLLOWING PROJECTS ARE TENTATIVELY TASKED FOR ACCOMPLISHMENT AS MUDICATED:

- 4, FY-84
 - (1) ARCTIC WEST (CLASSIFIED)
 - (2) NAVSHIPREPFAC GUAM, REPAIRS TO LIMA WHARF
 - (3) FLEET MOORING INSPECTION PACIFIC DATA BASE 98UBIC BAY, NSF DIEGO GARCIA, PMC SAN DIEGO, NAVSTA SAN DIEGO, WPNGTA SEAL BEACH, NAVSTA LONG BEACH)
 - (4) NSU SUBIC, WATERFRUNT FACILITIES INSPECTION
 - (5) NSD SUBIC, MONURUDY FUEL LINE REPAIRS
 - (6) DEGAUSSING RANGE SAN FRANCISCO, RANGE INSTALLATION
 - (7) UNDERWATER INSPECTION PROGRAM CNAVSHIPY PEARL HARBOR, NSC PEARL HARBOR, SUBASE PEARL HARBOR)
 - (8) SCARF REPAIR/INSPECTION

- (9) BARKING SANDS, UNDERWATER RANGE REPAIRS
- (10) NSU SUBIC, PILE REPAIR MARINE TERMINAL PIER PHASE Z

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apropagament accentions and application of the first CLASSIFIED

(REPAIRS , TO MODERATE AND MINOR DAMAGE)

FY-85

- ARCTIC WEST (CLASSIFIED) (1)
- BARKING SANDS NUNDERWATER RANGE WORK (2)
- FLEET MOORING INSPECTION PACTICE DATH UNDE PEARL (3) HARBOR HI, GUAM, JAPAN, PUGET SOUND EA)
 UNDERWATER INSPECTION PROGRAM (MARE ISLAND EA)
- (4)
- (5) SUBASE FEARL, MCON P-080, REPAIR AND EXTEND SEABALL THIS PROJECT WILL REQUIRE SEPARATE TASKING OF AN RNMCH. CBU OR OTHER ORGANIZATION AS FRYME CONTRACTOR" FOR PILE DRIVING AND TOPSIDE ZONE WATH VET ACCOMPLISHING IN WATER SUPPORT

1147 e/211 15 19XC 103

SA DUA ZIZ AUG BZ 12: 23:1 1 5500 LENCOSCIELA BOARL HARBOR HI

Հյանանանության Հանասանանանական ան ներկանում հա UNCLASSIFIEC ការស្រាក់ក្រាក់ ការប្រាហាការបស់ ការដែលប្រើក្រោយការបានក្នុងវ

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